

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2004-209408  
 (43)Date of publication of application : 29.07.2004

(51)Int.CI. B01J 23/89  
 B01J 29/14  
 C01B 3/40

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(54) CATALYST FOR REFORMING HYDROCARBON AND METHOD FOR REFORMING  
 HYDROCARBON

(57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a catalyst which is suitable for reforming hydrocarbons at a high reaction rate and efficiently reforms hydrocarbons containing sulfur compounds such as hydrogen sulfide and carbonyl sulfides suppressing the influence of sulfur poisoning to the utmost, and to provide a method for reforming hydrocarbons.

**SOLUTION:** The catalyst for reforming hydrocarbons comprises at least a multiple oxide within multiple oxides carrying a platinum group element on an oxide prepared by adding at least one kind selected from silica, alumina and zeolite to either one or both of a multiple oxide having a composition expressed by the following formula:  $aM-bNi-cMg-dO$  (wherein each of a, b, c and d is a molar ratio;  $a+b+c=1$ ;  $0.02 \leq a \leq 0.99$ ;  $0.01 \leq b \leq 0.99$ ;  $0.01 \leq c \leq 0.97$ ; d is the number required for oxygen to maintain a positive element and electrical neutrality; and M is at least one element selected from Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, Mn, Cu, Zn, Cd, Al and Si) and a multiple oxide containing Ni and Mg.

LEGAL STATUS

[Date of request for examination] 13.09.2005

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]